

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-10. (Cancel)

11.(Currently Amended) A blade driving device for cameras, comprising:

a base plate;

a blade; and

an actuator in which a rotor is made to turn about a turning axis within a range of a preset angle in a direction determined by a direction of a current supplied to a stator coil;

wherein said rotor of said actuator includes a column-shaped permanent magnet having surfaces perpendicular to the turning axis and a surface parallel with the turning axis and a frame body configured integrally with said permanent magnet,

wherein said frame body covers both ends of a turning axial region of said permanent magnet and continuously covers said surfaces perpendicular to the turning axis and said surface parallel with said turning axis of said permanent magnet in such a pattern that a plurality of exposed faces of said permanent magnet are provided, and

wherein said frame body is provided with a journal that is formed at each of portions covering the both ends of the turning axial region and that is supported by a bearing of said stator, and an output portion that is formed to be a portion extending in a radial direction from one of the ends of the turning axial region,

wherein, at each place where the ends of the turning axial region of said permanent magnet face said frame body covering the ends of the turning axial region, one of said permanent magnet and said frame body is provided with a polygonal concavity and another of said permanent magnet and said frame body is provided with a convexity projecting to be fitted in said concavity, and

wherein, at a place where said surface parallel with the turning axis of said permanent magnet faces said frame body covering said surface parallel with the turning axis, one of said

permanent magnet and said frame body is provided with concavities and another of said permanent magnet and said frame body is provided with convexities projecting to be fitted in said concavities.

12.(Cancel)

13.(Cancel)

14.(Currently Amended) A blade driving device for cameras, ~~according to claim 11,~~
comprising:

a base plate;

a blade; and

an actuator in which a rotor is made to turn about a turning axis within a range of a preset angle in a direction determined by a direction of a current supplied to a stator coil;

wherein said rotor of said actuator includes a column-shaped permanent magnet having surfaces perpendicular to the turning axis and a surface parallel with the turning axis and a frame body configured integrally with said permanent magnet,

wherein said frame body covers both ends of a turning axial region of said permanent magnet and continuously covers said surfaces perpendicular to the turning axis and said surface parallel with said turning axis of said permanent magnet in such a pattern that a plurality of exposed faces of said permanent magnet are provided,

wherein said frame body is provided with a journal that is formed at each of portions covering the both ends of the turning axial region and that is supported by a bearing of said stator, and an output portion that is formed to be a portion extending in a radial direction from one of the ends of the turning axial region,

wherein, at each place where the ends of the turning axial region of said permanent magnet face said frame body covering the ends of the turning axial region, one of said permanent magnet and said frame body is provided with a polygonal concavity and another of said permanent magnet and said frame body is provided with a convexity projecting to be fitted in said concavity,

wherein, at a place where said surface parallel with the turning axis of said permanent magnet faces said frame body covering said surface parallel with the turning axis, one of said permanent magnet and said frame body is provided with concavities and another of said permanent magnet and said frame body is provided with convexities projecting to be fitted in said concavities, and

wherein said permanent magnet is magnetized to have two magnetic poles in a radial direction, and at least one of said surfaces perpendicular to the turning axis has a groove configured along a boundary between said two magnetic poles, a part of said frame body is formed in the groove, and said output portion is situated on an extension line of said boundary.

15.(Previously Presented) A blade driving device for cameras according to claim 14, wherein said frame body is constructed to form said output portion and another output portion located at symmetrical positions of 180° with respect to said permanent magnet.

16.(Previously Presented) A blade driving device for cameras according to claim 11, wherein said blade driving device for cameras is a shutter device for cameras.

17.(Previously Presented) A blade driving device for cameras according to claim 11, wherein said blade driving device for cameras is a stop device for cameras.